Snell & Wilmer
L.L.P.
LAW OFFICES

One Arizona Center
400 East Van Buren Street
Suite 1900
Phoenix, Arizona 85004-2202
602.382.6000
602.382.6070 (Fax)
www.swlaw.com

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June 2, 2015

Emailed and Mailed
Docket Control
Arizona Corporation Commission
1200 West Washington Street
Phoenix, AZ 85007

RE: RCLEC, Inc.'s Responses to Staff's Third Set of Data Requests
Docket No. T-20912A-14-0300

Docket Control:

Enclosed are RCLEC, Inc.'s responses to Staff's Third Set of Data Requests in the above docket.

Sincerely,

Michael W. Patten

MWP:jh
Enclosure – Original and 13 Copies
cc: Matt Connolly

STAFF'S THIRD SET OF DATA REQUESTS TO
RCLEC, INC. ("RCLEC")
DOCKET NO. T-20912A-14-0300
June 1, 2015

In addition to a paper response, all information responses should also be provided in searchable PDF, DOC or EXCEL files via email or electronic media.

For each answer, please identify by name, title, and address each person providing information that forms the basis for the response provided.

Response: All answers are provided by legal representatives for RCLEC and Jeff Slater, Senior Director of Voice Gateways for RCLEC, 1400 Fashion Island Blvd., 7th Floor, San Mateo, CA 94404.

Please make sure each numbered item and each part of the item is answered completely.

STF 3.1 **In follow-up to the response information provided to STF 2.7, please describe in detail the third party 911 services provided by Bandwidth.com's 911 product. Please indicate if this product provides network provisioning or is just a database for use by a local exchange carrier. Please explain in detail how this product will integrate with the services for which RCLEC is requesting to provide in Arizona.**

Bandwidth provides 911 services to LECs, including wholesale providers, and Interconnected VoIP carriers. Bandwidth maintains connections to the databases of public safety answering points (PSAPs) used to obtain location and properly route 9-1-1 calls. The Bandwidth 911 solution consists of 1) a Dashboard portal, for provisioning, reporting, and trouble ticket functionality, 2) a nationwide facilities based CLEC network, and 3) call routing capabilities for emergency calls. Although RCLEC does not provide services to end users, if a 911 call was made on its network, Bandwidth would route that call to the PSAP and the emergency infrastructure. Please see attachment for Bandwidth's 911 service FAQs.

Supplemental Response (6-1-2015):

RCLEC has established a connection with Bandwidth via a dedicated trunk over which 911 calls would be routed for termination to the appropriate PSAP in the extremely improbable event that an end user call somehow originated on RCLEC's network.

As RCLEC explained in its initial response, it provides only wholesale service, so there is no feasible way for an end user to originate a call on RCLEC's network. Currently, RCLEC's sole customer is RingCentral. When RingCentral's end user customers place a 911 call, it is transferred directly to Bandwidth for routing to the appropriate PSAP via a dedicated trunk between RingCentral and Bandwidth. These calls do not transit RCLEC's network, so RCLEC believes it is not technically possible for such calls to originate from, or even be carried on, its network.

Nonetheless, out of an abundance of caution, RCLEC has established the trunk to Bandwidth for 911 traffic. Bandwidth is a well established provider of competitive 911 services. RCLEC previously provided a diagram of Bandwidth's standard network configuration for its offerings.

STF 3.2 **In follow-up to the response information provided to STF 1.25, please explain why RCLEC did not provide these cases with its Application as it did with the case provided in response to A-11) of its Application.**

RCLEC did not provide information about cases discussed in SFT 1.25 because they are not responsive to the call of the question in A-11, which asks about complaint proceedings before regulatory or law enforcement agencies.

Question A-11 calls for whether any of RCLEC's officers are now or have ever been involved in "any formal or informal complaint proceedings before any state or federal regulatory commission, administrative agency, or law enforcement agency."

RCLEC parent company's past civil litigation is not a formal or informal complaint proceeding, and therefore the Applicant's complete and correct response to the question is "No."

The Applicant provided information about the J2 case, a pending civil case litigation case involving the parent company, out of an abundance of caution. The applicant did not provide information the other 3 civil cases as they had been resolved by settlement prior to the filing of the application. None of the above civil cases trigger an affirmative response to question A-11.

bandwidth

WHITE PAPER

9-1-1 Services for Interconnected VoIP and Local Exchange Carriers — Frequently Asked Questions

You have a choice in E9-1-1 providers and because of the complexities 9-1-1 presents both operationally and technically, it is very important to find one best suited to meeting your specific needs. We have prepared this FAQ to help ensure your decision is an informed one, regardless of whether you choose to work with us, Intrado, TCS or a non tier 1 provider.

Question #1

What is a VoIP Provisioning Center (VPC)?

A VPC maintains connections to the databases public safety answering points (PSAPs) use to obtain location information to properly route 9-1-1 calls. Interconnected VoIP providers need a VPC provider to meet FCC regulations to enable subscribers to call 9-1-1.

Bandwidth is a VPC and one of only three Tier 1 VPCs in the U.S. Approximately 300 customers rely on our VPC expertise to support 9-1-1 for millions of end-user subscribers. We offer 100% PSAP Coverage with 93% Enhanced PSAP (E9-1-1) Coverage for U.S. and Canada. We are also the only VPC able to support your wholesale voice and SMS needs.

Question #2

What is supplied as part of your VoIP E9-1-1 solution?

The first of the four main components of Bandwidth's VoIP 9-1-1 solution is the Dashboard portal, delivering all provisioning, reporting, and trouble ticketing functionality. A single API or GUI interface allows customers to manage both their 9-1-1 service and their telephone number inventory, to dramatically simplify our customers' operations. The Dashboard provides a full suite of reports related to 9-1-1 to include: Unprovisioned 9-1-1 endpoints, Static ALI Status, API reports, Emergency CDRs. This portal-based solution is exclusively available from Bandwidth.

Second is our nationwide network. Bandwidth is a facilities-based CLEC in 48 states, with our voice network covering over 7000 rate centers. While a few wholesale VoIP providers offer nationwide rate center coverage, Bandwidth is the only one that can also support your 9-1-1 needs. Similarly, Bandwidth is the nation's only 9-1-1 provider to also offer wholesale VoIP services.

The third component is our call routing capabilities. Hosted in data centers in Denver and Marietta, Georgia, our call routing systems route tens of thousands of emergency calls per month, backed by our 24 x 7 x 365 Network Operations Center (NOC), Customer Experience team, and technical support to complete our turnkey managed service. You will not find this combination of technical expertise and dedication to customer support elsewhere.

The fourth component is our ability to provide customers a branded website for end users to modify their location information electronically without the need to develop to the API. This too is exclusively available for Bandwidth.

Question #3

Describe how address validation is performed by your VoIP E9-1-1 solution.

We start with your submitted civic/postal addresses, which we then geo-code to assign an X/Y coordinate for each record, providing confirmation upon successful validation. We then store the geo-coded address in the appropriate master street address guide (MSAG) compliant format for the jurisdiction in question. Each telephone number's address is then immediately available to respond to PSAP queries. The entire process takes minutes vs. the days and potentially weeks from competing providers.

Customers are required to provide a NENA ID and 24x7 contacts. Customers are responsible for registering all phone numbers through the Dashboard, correcting errors during provisioning, and if/when a subscriber moves, providing updated location information.

This process and the multiple databases employed within our address validation engine eliminate the requirement for customer pre-validation. We can however accept MSAG formatted addresses for validation to obtain geo-coded coordinates.

Bandwidth subscribes to the most current geo-code databases available in addition to working with all of the 9-1-1 authorities to obtain MSAG and GIS files. The dedicated support team in turn ensures timely updates to the validation engine.

Question #4

What is the average error rate?

Bandwidth customers enjoy an average success rate of 98 percent on initial submission, achieved by our validation engine as well as the enhanced functionality of providing alternative address matches to a specific customer's records at the time of submission. Bandwidth follows NENA I2 guidelines as well as any specific guidelines required by a given 9-1-1 authority. Currently the civic / postal / MSAG address is the norm for granularity. We strive to eliminate the costly and time consuming back and forth associated with legacy static solutions.

Question #5

What about No Records Found (NRF)?

We notify a customer of any NRF upon submission of a record. Simultaneously we notify the other carrier of record that an attempt to update the address has been made. That carrier will then have 48 hours to confirm or release the record for the customer to update the record. If no response from the carrier of record is received in 48 hours we will release the record to the customer for validation.

Question #6

Describe how a customer delivers VoIP 9-1-1 calls to you.

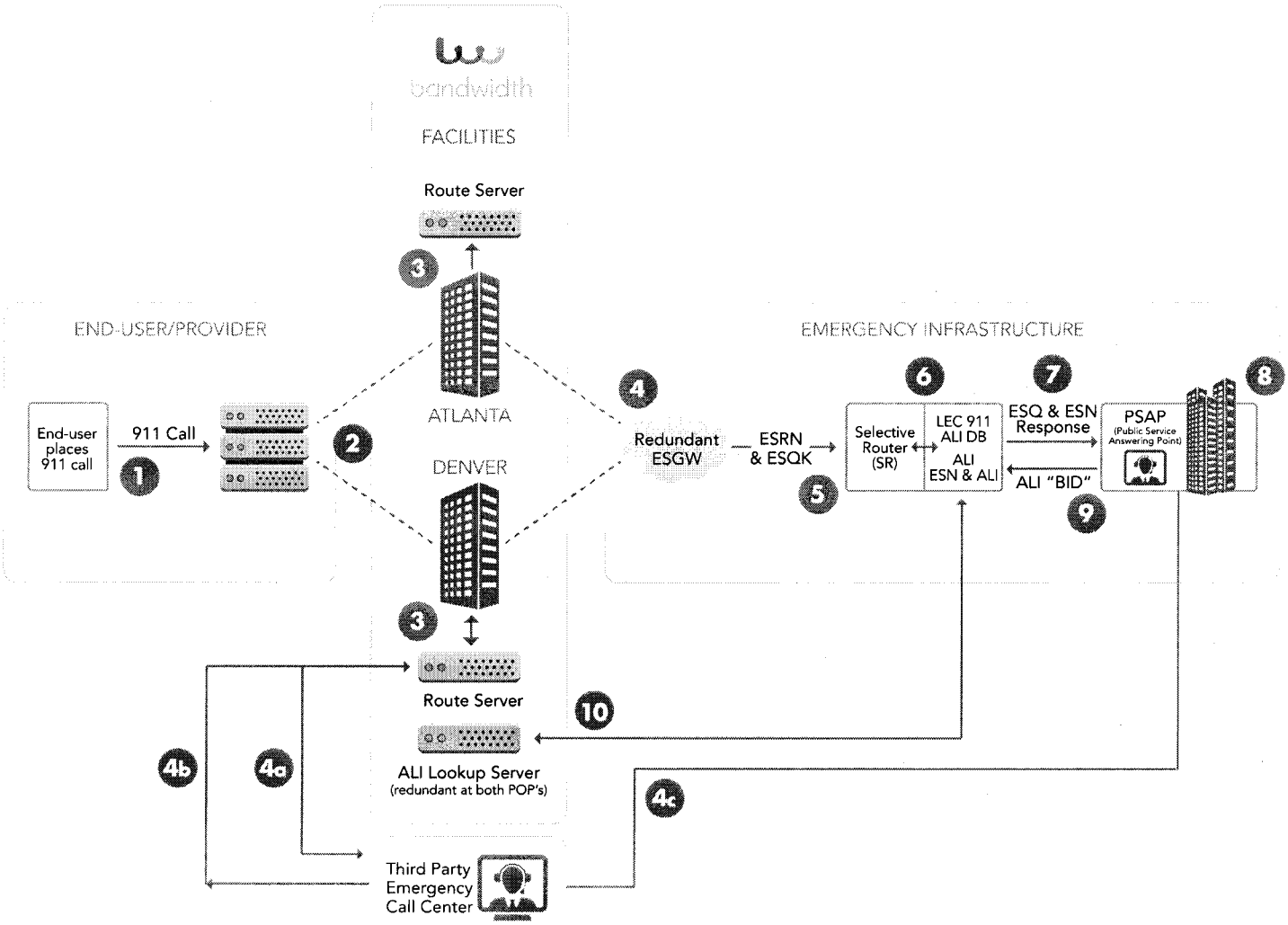
Bandwidth prefers to have 9-1-1 calls delivered via IP utilizing Session Initiation Protocol (SIP) for call signaling and the media or audio utilizing Real-Time Transport Protocol with the G.711 codec. We also offer flexible interconnections via private line or PSTN to meet specific customer needs.

Question #7

Explain your network topology.

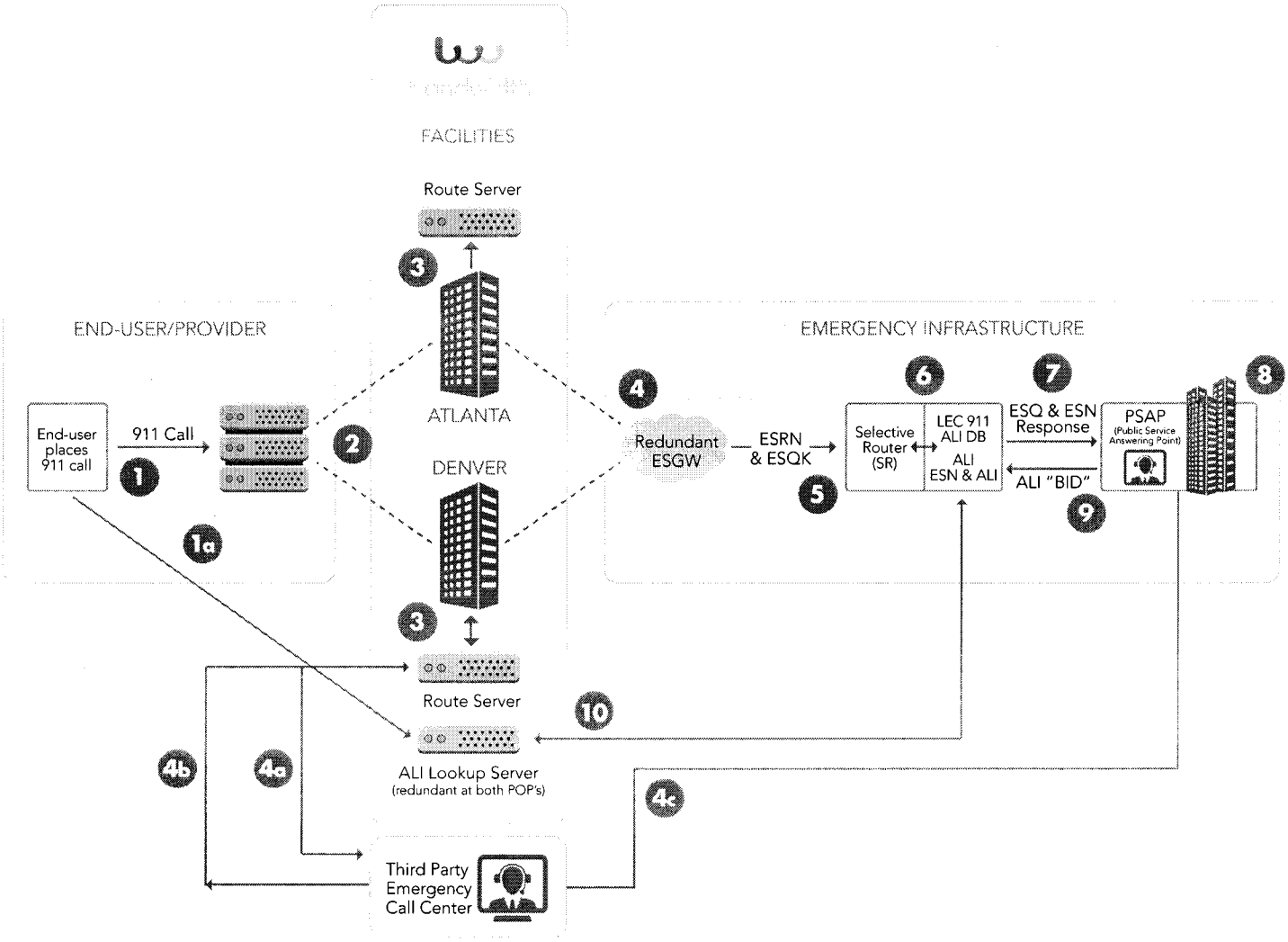
The Bandwidth VPC is deployed on a diverse environment of hardware from manufacturers such as Sonus, Acme Packet, Dell, Juniper, and Brocade. The traffic flows, as well as the PSAP data dips, are defined at a high level below, but also have many complex and custom configurations.

USE CASE 1 - REGISTERED LOCATION ROUTED TO AN I2 PSAP



1 Call placed from provider
2 Call delivered to Bandwidth's redundant POP's
3 Call routers at both sites can process the call and send out one of the redundant trunks
4 Bandwidth routes the call to the appropriate redundant ESGW with an ESRN and ESQK specific to the PSAP
5 The ESGW sends the 911 call to the Selective Router (SR)
6 SR "dips" the LEC 911 ALI database to obtain the ESN to route the call to the PSAP
7 The PSAP receives the pANI (ESQK)
8 The PSAP sends the ESQK to the LEC 911 database for the ALI "bid"
9 The LEC ALI database has the ESQK set to "steer" to the Dash ALI lookup servers for ALI

USE CASE 2 - 2-STEP, DYNAMICALLY REGISTERED



1 Call placed from provider

1a Phone interacts with inetwork provisioning platform to register location

2 Call delivered to Bandwidth's redundant POP's

3 Call routers at both sites can process the call and send out one of the redundant trunks

4 Based on registered location, Bandwidth routes the call to the appropriate redundant ESGW with an ESRN and ESQK specific to the PSAP

5 The ESGW sends the 911 call to the Selective Router (SR)

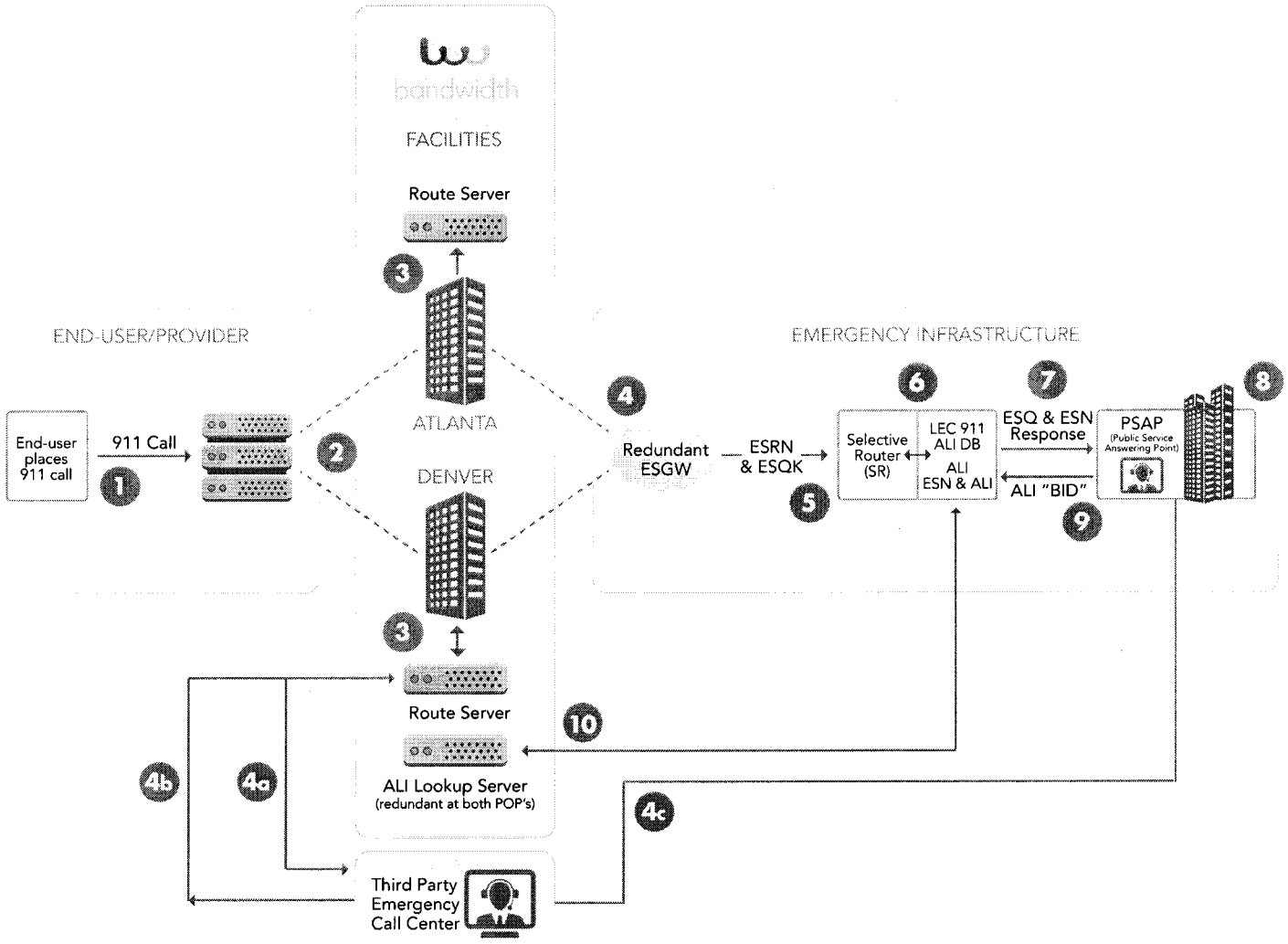
6 SR "dips" the LEC 911 ALI database to obtain the ESN to route the call to the PSAP

7 The PSAP receives the pANI (ESQK)

8 The PSAP sends the ESQK to the LEC 911 database for the ALI "bid"

9 The LEC ALI database has the ESQK set to "steer" to the Dash ALI lookup servers for ALI

USE CASE 3 - 1 STEP DYNAMICALLY REGISTERED LOCATION



1 Call placed from provider
2 Call delivered to Bandwidth's redundant POP's
3 Call routers at both sites can process the call and send out one of the redundant trunks. Route Servers are capable of decoding the location information in the SIP header of the call. Once decoded, the location object is sored with the subscriber record
4 Bandwidth routes the call to the appropriate redundant ESGW with an ESRN and ESQK specific to the PSAP
5 The ESGW sends the 911 call to the Selective Router (SR)
6 SR "dips" the LEC 911 ALI database to obtain the ESN to route the call to the PSAP
7 The PSAP receives the pANI (ESQK)
8 The PSAP sends the ESQK to the LEC 911 database for the ALI "bid"
9 The LEC ALI database has the ESQK set to "steer" to the Dash ALI lookup servers for ALI
10 The ALI lookup servers respond to the PSAP "bid" with the ALI to which the enduser is registered using redundant trunks

Question #8

Can you provide details on your 9-1-1 network?

We utilize a diverse network of primarily TDM trunks to connect to each of the selective routers supporting the PSAPs. Where available we utilize IP trunks. As NG9-1-1 rolls out across the country we will directly interface with each of those systems. Connectivity from the (IP or TDM) Selective Router to the PSAP is controlled entirely by the PSAP through the Local Area Carrier.

Bandwidth has system level redundancy, site level redundancy and IP Network redundancy as well as TDM Selective Router redundancy (where Mated-Pair-Tandem is deployed).

Bandwidth maintains a P.01 grade of service (GOS) for 9-1-1 call delivery to the Selective Routers. This GOS is also the guideline we use for delivery of 9-1-1 calls from a customer to Bandwidth.

Question #9

Describe QoS mechanisms in place to ensure delivery of our VoIP 9-1-1 calls.

Bandwidth's QoS supports the RTP streams and meets or exceeds the ITU-T-P.830 mean opinion score (MOS) standard ratings of 4.0 or higher (commonly referred to as toll quality). For the audio or RTP stream some of these measurements include delay, packet loss, and jitter. The Bandwidth VPC VoIP 9-1-1 Network uses dedicated voice infrastructure elements. We constantly monitor all aspects of our network and trigger alerts and alarms whenever usage is nearing specified thresholds.

Question #10

Describe how you keep the VoIP traffic secure.

Bandwidth's 9-1-1 solution uses a Private IP Network with Session Boarder Controllers (SBCs) used on all IP ingress and egress legs. Through the SBC's Bandwidth enforces topology hiding and media anchoring for all 9-1-1 calls using VoIP. For 9-1-1 calls requiring TDM access or termination, a Gateway is deployed at the TDM ingress or egress Points of Interconnection.

Question #11

What is dynamic call routing?

Dynamic routing improves the safety of your end-users, as the route is based on real-time location updates (not a manually updated, pre-programmed decision), utilizing the most up-to-date PSAP boundaries and caller location information? Bandwidth uses dynamic call routing in its 9-1-1 solution.

Question #12

Can you provide E9-1-1 to any PSAP, if the PSAP is E9-1-1 capable?

Your potential provider should be able to discuss with you a variety of PSAP connectivity options to maximize E9-1-1 availability. Good 9-1-1 providers will have a process for working with the PSAP to try to turn up service, should you need it. For full accommodation of your potential market growth, make sure your provider can cover 100% of the US, Canada, and Puerto Rico with 9-1-1.

Question #13

What are a carrier's capital costs to implement a 9-1-1 solution?

Upgrading your infrastructure to support 9-1-1 should not require costly hardware-based capital investments or the operational headache of forklift upgrades. Instead, your potential E9-1-1 provider should be able to upgrade your network quickly and painlessly, using software-based, IP technology, leveraging existing infrastructure.

Question #14

Do you offer automatic location information (ALI) database management services?

Yes, we offer services to check, modify, reformat, and insert records into all ALI databases nationwide for local exchange carriers to meet 9-1-1 requirements for their traditional wireline subscribers.

Question #15

What is your roadmap for Next Gen 9-1-1?

Bandwidth is a leader in NG9-1-1. We are currently deploying NG9-1-1 call routing services to the state of Alabama, one of the first such deployments in the country. Because our routing system is NG9-1-1 ready and consistent with National Emergency Number Association (NENA) standards, we are able to interface directly to NG9-1-1 systems as they are deployed around the country, with no changes required for our carrier customers. Bandwidth is also currently conducting text to 9-1-1 trials with several partners and in active discussion with the FCC on options to rollout nationwide text to 9-1-1 services.